UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
KEEHN, RICHARD G

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/705,909	MORETON ET AL.
	Examiner	Art Unit
	RICHARD G. KEEHN	4121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>13 November 2003</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-40</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-40</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>13 November 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>2/12/2004 & 6/14/2004</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-40 have been examined and are pending.

Drawings

1.   The drawings are objected to under 37 CFR 1.83(a) because they fail to show the "YES" path in Figure 1, item 116 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2.   The numbering of claims is not in accordance with 37 CFR 1.126 which requires

the original numbering of the claims to be preserved throughout the prosecution. When

claims are canceled, the remaining claims must not be renumbered. When new claims

are presented, they must be numbered consecutively beginning with the number next

following the highest numbered claims previously presented (whether entered or not).

Applicant did not submit Claims 6 and 29, hence applicant must renumber in

accordance with 37 CFR 1.126.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3.   Claims 7, 10, 18, 21, 30, 33, 36 and 38 are rejected under 35 U.S.C. 102(a) as

being anticipated by applicant supplied Non-Patent Literature from Microsoft entitled

"USB Remote NDIS Devices and Windows" (Microsoft).

As to Claim 7, 18, 30 and 36, Microsoft teaches a method, apparatus, system

and program for attaching universal serial bus devices network adapter supporting both

remote network drive interface specification and non-network drive interface

specification, comprising the steps of:

    plugging a network device into a universal serial bus port on a host (Microsoft,

Page 1, under the heading "Remote NDIS" recites a Plug and Play USB adapter);

    detecting the network device by the host (Microsoft, Page 2 recites the

REMOTE_NDIS_KEEPALIVE_MSG which is used to detect the network adapter);

    issuing a universal serial bus reset to the network device by the host (Microsoft,

Page 2 recites the REMOTE_NDIS_RESET_MSG which is used to reset the network

adapter);

    resetting the state of the network device (Microsoft, Page 2 recites the

REMOTE_NDIS_SET_MSG which is used to set the network adapter);

    issuing by the host a command enabling the network device to communicate on

the universal serial bus (Microsoft, Page 2 recites the

REMOTE_NDIS_INITIALIZE_MSG which is used to enable the network adapter);

    issuing by the host a command enabling to retrieve device descriptors from the

network device (Microsoft, Page 2 recites the REMOTE_NDIS_QUERY_MSG which is

used to query the network adapter);

    returning by the network device a device descriptor indicating its function

(Microsoft, Page 2 recites the REMOTE_QUERY_CMPLT which is used to respond to

the network adapter's query); and

    issuing by the host configuration commands, whereby, the network device

returns a list of descriptors (Microsoft, Page 2 recites the

REMOTE_NDIS_INITIALIZE_CMPLT which is used to send a list of adapter buffering

and alignment constraints from the network adapter to the host).

As to Claim 10, 21, 33, and 38, Microsoft teaches the method, apparatus, system

and program of claims 7, 18, 30 and 36, wherein the host discards the configuration for

a remote network drive interface specification (RNDIS) (Microsoft, Page 2 recites the

REMOTE_NDIS_HALT_MSG which is used to effectively discard the RNDIS network

adapter).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham **v.** John Deere Co., 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4.   Claims 1-3, 13-15, and 24-26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over applicant supplied Non-Patent Literature from Microsoft entitled "USB

Remote NDIS Devices and Windows" (Microsoft), and further in view of Non-Patent

literature from Brownell and Machek on USB Host to Host links (Brownell et al.), US

2003/0208579 A1 (Brady Jr. et al.), and US 6,061,692 (Thomas et al.).

        As to Claim 1, 13 and 24, Microsoft teaches a method, apparatus and system for

attaching a universal serial bus network adapter supporting both a remote network drive

interface specification and a non-network drive interface specification, comprising the

steps of:

        receiving by a network adapter a first request from a host (Microsoft, Page 2

recites the REMOTE_NDIS_QUERY_MSG sent by a host to a network adapter to

request information);

returning a remote network drive interface specification configuration from the network adapter (Microsoft, Page 2 recites the REMOTE_NDIS_QUERY_CMPLT response from the adapter to the host which is sent using RNDIS protocol); and

returning a non-remote network drive interface specification configuration from the network adapter (Microsoft, Page 2 recites the REMOTE_NDIS_QUERY_CMPLT response from the adapter to the host; Brownell et al. – Page 6 recites the use of CDC Ethernet driver).

Microsoft does not teach, but Brownell et al. teach providing two universal serial bus configurations to a universal serial bus network (Brownell et al. – Pages 6 and 8 recite the use of CDC Ethernet and NDIS drivers);

Microsoft does not teach, but Brady Jr. et al. teach receiving by the network adapter a second request from a host, when there is an indication of multiple support configurations (Brady Jr. et al. – Page 2, paragraph 0019 recites the sending of a second message from a host triggered by the indication that previous requested configuration file was not sent, indicating multiple possible configurations).

Microsoft does not teach, but Thomas et al. teach parsing all the received configuration to determine the configuration supported by the device (Thomas et al. – Column 2, lines 13-15 recites parsing to determine configuration); and

selecting by the host the configuration that matches a client driver (Thomas et al. – Column 2, line 15 recites applying the configuration information, which inherently includes selection).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine providing two universal serial bus configurations to a

universal serial bus network, namely NDIS and CDC-Ethernet taught by Brownell, with

the method of receiving by a network adapter a first request from a host, returning a

remote network drive interface specification configuration from the network adapter, and

returning a non-remote network drive interface specification configuration from the

network adapter taught by Microsoft.

One of ordinary skill in the art at the time the invention was made would have

been motivated to provide to the market a flexible usb network adapter to accommodate

IBM PC and non-IBM PC remote networking platforms (e.g. Apple or PDA). (Brownell –

Pages 6 and 8 demonstrate the combination of NDIS and CDC-Ethernet in the same

driver package. It would have been obvious to try extending NDIS to Remote NDIS.

"When there is a design need or market pressure to solve a problem and there are a

finite number of identified, predictable solutions, a person of ordinary skill has good

reason to pursue the known options within his or her technical grasp. If this leads to the

anticipated success, it is likely the product not of innovation but of ordinary skill and

common sense. In that instance the fact that a combination was obvious to try might

show that it was obvious under §103." See *KSR Intern. v. Teleflex Inc.*, 127 S.Ct. 1727,

1742 (2007))

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the method of receiving by the network adapter a

second request from a host, when there is an indication of multiple support

configurations taught by Brady Jr. et al., with the method of receiving by a network adapter a first request from a host, returning a remote network drive interface specification configuration from the network adapter, and returning a non-remote network drive interface specification configuration from the network adapter taught by Microsoft.

One of ordinary skill in the art at the time the invention was made would have been motivated to send a second the configuration command on the detection of a non-successful configuration rather than passively wait for an indefinite period of time (Brady Jr. et al. - Page 2, paragraph 0019).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of parsing all the received configuration to determine the configuration supported by the device, and selecting by the host the configuration that matches a client driver taught by Thomas et al., with the method of receiving by a network adapter a first request from a host, returning a remote network drive interface specification configuration from the network adapter, and returning a non-remote network drive interface specification configuration from the network adapter taught by Microsoft.

One of ordinary skill in the art at the time the invention was made would have been motivated to determine the correct configuration to be used (Thomas et al. - Column 2, lines 13-15).

As to Claim 2, 14 and 25, the combination of Microsoft, Brownell et al., Brady Jr.

et al. and Thomas et al. teaches the method, apparatus and system of claims 1, 13 and

24, wherein the client driver is a remote network drive interface specification (RNDIS)

(Microsoft, Page 2 recites a driver capable of RNDIS).

As to Claim 3, 15 and 26, the combination of Microsoft, Brownell et al., Brady Jr.

et al. and Thomas et al. teaches the method, apparatus and system of claim 1, 13 and

24, wherein the client driver is a communications data class Ethernet (CDC-Ethernet)

(Brownell et al. – Page 6 recites the use of CDC Ethernet driver).

5.   Claims 4, 16 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable

over the combination of applicant supplied Non-Patent Literature from Microsoft entitled

"USB Remote NDIS Devices and Windows" (Microsoft), Non-Patent literature from

Brownell and Machek on USB Host to Host links (Brownell et al.), US 2003/0208579 A1

(Brady Jr. et al.), and US 6,061,692 (Thomas et al.), and in further view of US 6,532,497

B1 (Cromer et al.).

As to Claims 4, 16 and 27, the combination of Microsoft, Brownell et al., Brady Jr.

et al., and Thomas et al. teaches the method, apparatus and system of claims 1, 13 and

24.

The combination of Microsoft, Brownell et al., Brady Jr. et al., and Thomas et al.

does not teach, but Cromer et al. teach wherein the network adapter determines

whether any sub-system that corresponds to any configuration is currently active

(Cromer et al. – Column 8, lines 46-51 recite the network adapter in a multiple

configuration environment reporting the client activity state to a server).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the method wherein the network adapter determines

whether any sub-system that corresponds to any configuration is currently active taught

by Cromer et al., with the method for attaching a universal serial bus network adapter

supporting both a remote network drive interface specification and a non-network drive

interface specification taught by the combination of Microsoft, Brownell et al., Brady Jr.

et al., and Thomas et al.

One of ordinary skill in the art at the time the invention was made would have

been motivated to ensure the system is functional (Cromer et al. - Column 1, lines 44-

52).

6.   Claims 5, 17 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable

over the combination of applicant supplied Non-Patent Literature from Microsoft entitled

"USB Remote NDIS Devices and Windows" (Microsoft), Non-Patent literature from

Brownell and Machek on USB Host to Host links (Brownell et al.), US 2003/0208579 A1

(Brady Jr. et al.), and US 6,061,692 (Thomas et al.), and in further view of US 6,170,028

B1 (Wallach et al.).

As to Claims 5, 17 and 28, the combination of Microsoft, Brownell et al., Brady Jr. et al., and Thomas et al. teaches the method of claim 1, 13 and 24.

The combination of Microsoft, Brownell et al., Brady Jr. et al., and Thomas et al. does not teach, but Wallach et al. teach wherein the network adapter determines whether the active configuration matches the currently active sub-system, the method, apparatus and system further comprising issuing a command to disable the sub-system when there is no match (Wallach et al. – Column 21, Claim 1 recites the suspending all communication of the network adapter, which suspends and disables any sub-system controlled by the network adapter), and

issuing a command to activate a new sub-system corresponding to the new configuration selected by the host (Wallach et al. – Columns 21-22, Claims 1-3 recite the restarting of communications after configuration swap).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of issuing a command to disable the sub-system when there is no match and issuing a command to activate a new sub-system corresponding to the new configuration selected by the host taught by Wallach et al., with the method for attaching a universal serial bus network adapter supporting both a remote network drive interface specification and a non-network drive interface specification taught by the combination of Microsoft, Brownell et al., Brady Jr. et al., and Thomas et al.

One of ordinary skill in the art at the time the invention was made would have been motivated to allow a user to "hot-swap" configurations without having to rely on planned downtime (Wallach et al. – Column 4, lines 20-28).

7.   Claims 8, 9, 11, 12, 19, 20, 22, 23, 31, 32, 34, 35, 37, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant supplied Non-Patent Literature from Microsoft entitled "USB Remote NDIS Devices and Windows" (Microsoft), and further in view of Non-Patent literature from Brownell and Machek on USB Host to Host links (Brownell et al.).

As to Claim 8, 19, 31 and 37, Microsoft teaches the method, apparatus, system and program of claims 7, 18, 30 and 36 wherein the resetting of the state of the network device involves disabling one of a remote network drive interface specification (RNDIS) (Microsoft – Page 2 recites the REMOTE_NDIS_RESET_MSG command which resets the configuration RNDIS).

Microsoft does not teach, but Brownell et al. teach a communications data class Ethernet (CDC-Ethernet) (Brownell et al. – Page 6 recites the use of CDC Ethernet driver).

The motivation and obviousness arguments for the use of CDC Ethernet are the same as in Claim 1.

As to Claim 9, 20 and 32, Microsoft teaches the method, apparatus and system

of claim 7, 18 and 30 wherein the list of descriptors for the configuration commands are

for a remote network drive interface specification (RNDIS) (Microsoft, Page 2 recites the

REMOTE_NDIS_QUERY_MSG which is used to query the RNDIS network adapter).

Microsoft does not teach, but Brownell et al. teach or a communications data

class Ethernet (CDC-Ethernet) (Brownell et al. – Page 6 recites the use of CDC

Ethernet driver).

The motivation and obviousness arguments for the use of CDC Ethernet are the

same as in Claim 1.

As to Claim 11, 22, 34 and 39, Microsoft teaches the method, apparatus, system

and program of claim 7, 18, 30 and 36 wherein the host accepts the configuration for

the communications data class (Microsoft, Page 2 recites the

REMOTE_NDIS_INITIALIZE_MSG which is used to accept the network adapter).

Microsoft does not teach, but Brownell et al. teach Ethernet (CDC-Ethernet)

(Brownell et al. – Page 6 recites the use of CDC Ethernet driver).

The motivation and obviousness arguments for the use of CDC Ethernet are the

same as in Claim 1.

As to Claim 12, 23, 35 and 40, Microsoft teaches the method, apparatus, system

and program of claim 7, 18, 30 and 36 wherein the host issues a configuration to the

device to use the communications data class (Microsoft, Page 2 recites the

REMOTE_NDIS_INITIALIZE_MSG which is used to initialize the network adapter with a

configuration RNDIS).

Microsoft does not teach, but Brownell et al. teach Ethernet (CDC-Ethernet)

configuration (Brownell et al. – Page 6 recites the use of CDC Ethernet driver).

The motivation and obviousness arguments for the use of CDC Ethernet are the

same as in Claim 1.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. These include:

- US 2003/0200321 A1 – System and Automated Connection to Virtual Private
  Networks Related Applications

- US 6,894,602 B2 – System and Method for Active Detection of Connection to
  a Network

- US 2003/0069956 A1 – Object Oriented SNMP Agent

- US 2003/0069955 A1 – SNMP Agent Object Model

- US 6,938,079 B1 – System and Method for Automatically Configuring a Client
  Device

- US 2005/0060442 A1 – Method, System, and Program for Managing Data
  Transmission Through a Network

- US 2005/0044221 A1 – Method, System and Program for Processing a
  packet to Transmit on a Network in a Host System Including a Plurality of
  Network Adaptors having Multiple Ports

- US 6,169,475 B1 – System and Method for Active Detection of Connection to
  a Network

- US 6,681,244 B1 – System and Method for Operating a Network Adapter
  when an Associated Network Computing System is in a Low-Power State

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD G. KEEHN whose telephone number is (571)270-5007. The examiner can normally be reached on Monday through Thursday, 7:30am - 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on 571-272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RGK

/Taghi T. Arani/
Supervisory Patent Examiner, Art Unit 4121
1/14/2007